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United States Patent [19]

Amin et al.

[11] **Patent Number:** 5,759,836[45] **Date of Patent:** Jun. 2, 1998[54] **OSTEOARTHRITIS-ASSOCIATED
INDUCIBLE ISOFORM OF NITRIC OXIDE
SYNTHETASE**[75] **Inventors:** Ashok R. Amin, Union, N.J.; Steven B. Abramson, Rye, N.Y.[73] **Assignee:** Hospital For Joint Diseases, New York, N.Y.[21] **Appl. No.:** 410,739[22] **Filed:** Mar. 27, 1995[51] **Int. Cl.⁶** C12N 9/02; C12N 9/99[52] **U.S. Cl.** 435/189; 435/184[58] **Field of Search** 435/25, 172.3,
435/184, 189, 320.1; 536/23.2[56] **References Cited****U.S. PATENT DOCUMENTS**

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[57]

ABSTRACT

An novel isoform of inducible nitric oxide synthase (OA-NOS) has been identified in osteoarthritis-affected articular cartilage. Some properties, including molecular weight, are similar to the constitutive isoform of neuronal nitric oxide synthase (ncnos) while other properties share similarity with the previously identified inducible nitric oxide (iNOS). Acetylating agents, such as aspirin and N-acetylimidazole act on both iNOS and OA-NOS by inhibiting their catalytic activities. A method is provided to screen for acetylating agents that inhibit OA-NOS, and the selective inhibition of OA-NOS by inhibitory agents is determined by comparison to a panel of different isoforms of nitric oxide synthase.

2 Claims, 4 Drawing Sheets